PHILIP M. HEMKEN, Ph.D.
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ACADEMIC TRAINING

- Iowa State University, Ames, IA. Muscle Biology Group, June 1991-May 1996. Molecular, Cellular, and Developmental Biology, Ph.D.

- Washington University in St. Louis, St. Louis, MO. August 1988-May 1991. Biotechnology, MA

- Iowa State University, Ames, IA. August 1982-December 1986. Microbiology, Chemistry Minor, BS.

PROFESSIONAL EXPERIENCE

- Abbott Laboratories, Abbott Park IL, Senior Scientist, Molecular Oncology Program, December 1998-present. Developing RT-PCR assays for colon cancer. Help provide data to support patent office actions. Member of the Cancer New Lead Team that screens new cancer leads from outside of Abbott. Lead the development of *in situ* hybridization assays. Performed molecular profiling experiments to investigate clinically useful markers and gene expression profiles for breast cancer.

- Abbott Laboratories, Abbott Park IL, Technical Specialist, Cancer Business Teams, June 1997-December 1998. Provide support for cancer diagnostic product manufacturing and testing. Perform technical troubleshooting, product improvement, research for customer follow-up, technical teaching, customer support, technical writing, and cost reductions. Write deviation reports, and change requests.

- Argonne National Laboratory, Argonne, IL. Postdoctoral Scientist, June 1996-May 1997. Helped develop microchip array biology for sequencing by hybridization and for diagnostic tests.

- Jewish Hospital at Washington University Medical Center, St. Louis, MO. Head Research Technician, Renal Research, March 1988-May 1991. Produced and characterized monoclonal antibodies to bovine kidney vacuolar proton-ATPase. Maintained all cell and tissue cultures. Performed immunocytochemical experiments with new monoclonal antibodies. Held lab safety officer position. While working full-time I obtained my Masters Degree in Biotechnology.

- Sigma Chemical Company, St. Louis, MO. Chemist, Immunochemicals Department, January 1987-February 1988. Developed monoclonal antibodies, hybridoma and cell culture reagents and established them into new products. Assayed acquired monoclonal antibodies and existing hybridoma reagents to assure quality.

TECHNICAL EXPERIENCE

Protein purification, column chromatography, RNA and DNA isolation, *in vitro* transcription of RNA, DNA and RNA hybridization on acrylamide array chips, cDNA library construction, cDNA cloning, cDNA synthesis, PCR, RT-PCR, Northern and Southern blot analysis, cell and tissue culture, monoclonal and polyclonal antibody production and characterization, ELISA, Western blot analysis, one and two dimensional polyacrylamide-gel-electrophoresis, immunoprecipitation, immunofluorescence, light microscopy, confocal microscopy, transmission electron microscopy, immuno-electron microscopy, scanning electron microscopy.

Computer skills: Lotus Notes, StatGraphics, Jump, MS Office 2000, Genetics Computer Group DNA analysis software, Visio, Internet literature searches.

HONORS: Sigma Xi (Full Member), Gamma Sigma Delta

SOCIETY MEMBERSHIPS: American Society for Cell Biology, Microscopy Society of America

SELECTED ABSTRACTS

Hemken, P., Roberts, L., Hayden, M. and Friedman, P. (2001) "Molecular Markers for Colorectal Cancer". Abbott Laboratories Corporate Technology Exchange June 7-8, 2001.

Hemken, P., Roberts, L., and Friedman, P. (1999) "The Molecular Detection of Markers by *In Situ* Hybridization". Abbott Laboratories Corporate Technology Exchange June 3-4, 1999.

Hemken, P., Becker, B., Bellin, R., Huiatt, T., and Robson, R. (1996) Nucleotide sequence of paranemin reveals it is a novel intermediate filament protein. *Mol. Biol. Cell* 7:557a.

Hemken, P., Becker, B., Bellin, R., Huiatt, T., and Robson, R. (1995) Molecular cloning and characterization of muscle paranemin, an intermediate filament-associated protein. *Mol. Biol. Cell* 6:377a.

Hemken, P., Robson, R., and Stromer, M. (1994) Purification and selected characterization of muscle paranemin, an intermediate filament-associated protein. *Mol. Biol. Cell* 5:299a.

PUBLICATIONS

Hemken, P., Bellin, R., Sernett, S., Becker, B., Huiatt, T., and Robson, R. (1997) Molecular characteristics of the novel intermediate filament protein paranemin. Sequence reveals EAP-300 and IFAPa-400 are highly homologous to paranemin. *J. Biol. Chem.* 272:32489-32499.
This paper is available on line at http://www.jbc.org.

Hemken, P. (1996) Purification, characterization, and molecular cloning of muscle paranemin. Ph.D. Thesis, Iowa State University.

Hemken, P., Guo, X.-L., Wang, Z.-Q., Zhang K., and Gluck, S. (1992) Immunologic evidence that vacuolar H+ATPase with heterogeneous forms of Mr = 31,000 subunit have different membrane distributions in mammalian kidney. *J. Biol. Chem.* 267:9948-9957.

Wang, Z.-Q., Hemken, P., Menton, D., and Gluck, S. (1992) Expression of vacuolar H+ATPase in mouse osteoclasts during *in vitro* differentiation. *Am. J. Physiol.* 263(Renal Fluid Electrolyte Physiol. 32):F277-F283.

Cohen, E., Bastani, B., Cohen, M., Kolner, S., Hemken, P., and Gluck, S. (1992) Absence of H+ATPase in cortical collecting tubules of a patient with sjogren's syndrome and distal renal tubular acidosis. *Nephrology*, 3:264-271.

Bastani, B., Purcell, H., Hemken, P., Trigg, D., and Gluck, S. (1991) Expression and distribution of renal vacuolar proton-translocating adenosine triphosphatase in response to chronic acid and alkali loads in the rat. *J. Clin. Invest.* 88:126-136.

Purcell, H., Harris, K., Hemken, P., Klahr, S., and Gluck, S. (1991) Cellular distribution of H+-ATPase following acute unilateral ureteral obstruction in rats. *Am. J. Physiol.* 261(Renal Fluid Electrolyte Physiol. 30):F365-F376.

INVITED SPEAKER

Michigan Society for Clinical Laboratory Science and Michigan Section of the American Association for Clinical Chemistry 1998 Annual Meeting and Exhibits April 22-24, 1998. Two hour seminar entitled "Cancer Antigen Testing".